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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,311	07/14/2006	Shinichi Ikeda	HIRA.0230	2506

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EXAMINER	
HAWKINS, KARLA	
ART UNIT	PAPER NUMBER
1797	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/586,311	IKEDA ET AL.	
	Examiner	Art Unit	
	KARLA HAWKINS	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/18/08, 11/21/06, 7/14/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is the initial Office action for application 10/586,311.

2. Claims 1-21 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

   1. Determining the scope and contents of the prior art.
   2. Ascertaining the differences between the prior art and the claims at issue.
   3. Resolving the level of ordinary skill in the pertinent art.
   4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being obvious over **OZEKI (JP 2001-198431)** in view of **PALAZZOTTO ET AL (US 5,191,101)**.

6. With regard to claims 1, 6, 9, and 14 **OZEKI** discloses a film which penetrates hydrogen, this transmission film can be used for various gas permeation (paragraph 1), the film is supported on a macro pore porous support functional membrane (paragraph 32); the material of the film is preferred to have the ingredient of a silicone resin (paragraph 54 and 55).

7. **OZEKI** does not appear to explicitly disclose the use of phenylheptamethylcyclotetrasiloxane or 2, 6-cis-diphenylhexamethylcyclotetrasiloxane.
8. However, **PALAZZOTTO** discloses a polymerizable compositions containing cationically – sensitive materials and organometallic complex compounds (col. 1 lines 10-17), cationically-sensitive monomers which can be polymerized include cyclic siloxanes such as phenylheptamethylcyclotetrasiloxane (col. 16, lines 54-68).

   * **OZEKI** and **PALAZZOTTO** are analogous art because they are from the *problem-solving area* of separating components. **OZEKI** teaches the method whereas **PALAZZOTTO** is relied upon to teach the materials.
9. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the silicon resin of **OZEKI** to include the phenylheptamethylcyclotetrasiloxane of **PALAZZOTTO**. **OZEKI** teaches the silicone in the invention has raw materials which consist of silicone with credit of the high-polymer linear polyorganosiloxane (**OZEKI,** paragraph 79).
10. The motivation would have been not to limit the polymerization process to ultraviolet radiation (**PALAZZOTTO**, col. 1, lines 64-67).
11. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.
12. With further regard to claims 6, and 14, **OZEKI** teaches the construction material of pourous support is preferably a metal or metal oxide (paragraph 36); and the

raw material of hot cure type silicone which hardening follows quickly by heating at 100 to 150 ºC (paragraphs 80 and 81). **OZEKI** and **PALAZZOTTO** disclose the claimed invention except for the thermally cured range from 200 ºC to 500 ºC. It would have been obvious to one having ordinary skill in the art at the time the invention was made to cure in the range of 200 ºC to 500 ºC, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

13. Regarding claims 2 and10, **OZEKI** teaches the construction material of pourous support is preferably a metal or metal oxide (paragraph 36).

14. Regarding claims 3, 7, 11, and15, **ORTEZ** discloses using an alumina source and/or a silica source (paragraph 21); the construction material of pourous support is preferably a metal or metal oxides not limited to alumina, silica, and titania (paragraph 36).

15. Regarding claims 4, 12, 17, 18, and 21, **OZEKI** teaches the construction material of pourous support is preferably a metal or metal oxide (paragraph 36); and the raw material of hot cure type silicone which hardening follows quickly by heating at 100 to 150 ºC (paragraphs 80 and 81). **OZEKI** and **PALAZZOTTO** disclose the claimed invention except for the thermally cured range from 200 ºC to 500 ºC. It would have been obvious to one having ordinary skill in the art at the time the invention was made to cure in the range of 200 ºC to 500 ºC, since it has been held that where the general conditions of a claim are disclosed in the prior art,

discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

16. Regarding claims 5, 8, 13, 16, 19, and 20, **OZEKI** teaches the film is heated at 80°C (paragraph 114, example 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARLA HAWKINS whose telephone number is (571) 270-5562. The examiner can normally be reached on Monday-Thursday 7:30- 5, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Duane S. Smith/
Supervisory Patent Examiner, Art Unit 1797

Karla Hawkins
Examiner
Art Unit 1797